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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,880	11/20/2000	Markku Lipponen	460-009934-US	1077

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Clarence A Green
Peerman & Green LLP
425 Post Road
Fairfield, CT 06430

EXAMINER

TRINH, TAN H

ART UNIT PAPER NUMBER

2618

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/716,880

Applicant(s)

LIPPONEN ET AL.

Examiner

TAN TRINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-15 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 5 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 9, 15, 20 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor (U.S. Patent No. 20030025679).

Regarding claims 1, 9 and 15, Taylor teaches an electronic device (see fig. 1), a keyboard(see fig. 1, keyboard 20), comprising: a touch sensitive element (see fig. 2 and 3, sensitive touchpad 26, page 3, sections [0051-0052]), a keyboard plate fixed over the touch sensitive element (see fig. 2, keyboard plate (key-mat) 22 fixed over the sensitive touchpad 26), so that the depression of a key of the keyboard plate cause the key to touch the touch sensitive element essentially at a position on the touch sensitive element corresponding to the point of the key and mean correlating the position of touching on the sensitive element according to which key is depressed (see figs. 1-3, pages 2-3, sections [0038-0052]). (Since the technology provides a flexible substrate for the sensor grids of the mutually capacitance-sensitive touchpad. The flexible substrate is not only capable of conforming to actuate surfaces, such as the underside of the key-mat 22, it is also capable of being slight deformed. This is important because **when the key 20 is being pressed so that the post 24 depresses the dome 36 and actuates the mechanical switch 32, the edges 38 of the key 20 will be pressing on and slightly deforming**

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the touchpad 26. This movement of the touchpad 26 should be minimized in order to reduce damage that might occur to electrodes disposed thereon (see page 3, section [0051]).

Regarding claims 2 and 20, Taylor teaches an electronic device characterized in that the keyboard plate is a keyboard mat (see figs. 2-3, keyboard mat 22, page 2, section [0039-0040] and page, 3 section [0043]).

Regarding claim 22, Taylor teaches wherein the electronic device is provided with a position recognizing element for recognizing the position of the keyboard element (see figs. 6-8 and 11, pages 3-5, sections [0046-0081]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Lee (U.S. Patent No. 6243595).

Regarding claims 4 and 10, Taylor fails to teach wherein the keyboard is slidably mounted in the electronic device.

However, Lee teaches the keyboard is slidably mounted in the electronic device See figs. 1 and 2, the keyboard 7 is slidably mounted in the electronic device 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Taylor system and by the teaching of Lee on the sliding keyboard in order to provide user with larger screen and easier to used of key pad.

Regarding claim 19, Taylor teaches wherein the electronic device is provided with a position recognizing element for recognizing the position of the keyboard element (see figs. 6-8 and 11, pages 3-5, sections [0046-0081]).

5. Claims 3, 6-8, 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Riddiford (U.S. Patent No. 6587675).

Regarding claims 3 and 21, Taylor teaches wherein the keyboard plate is a rubber-like material which is able to deform (see page 2-3, sections [0039-0043]). But Taylor fails to teach the keyboard plate is a bubble membrane.

However, Riddiford inherently teaches the keyboard plate is a bubble membrane (see fig. 4, flexible membrane 22, and col. 3, lines 63-col. 4, line 8, since on depressing a key, is underside contacts the membrane surface on bubble membrane and connects two adjacent conductive area).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Taylor system and by the teaching of Riddiford on the membrane space surface technique in order to provide the array of keys which each has a conductive surface facing the membrane and spaced slightly away from the membrane when no key is depressed (see Riddiford col. 3, line 65-col. 4, line 1).

Regarding claims 6 and 12, Taylor teaches an electronic device (see fig. 1) which comprises at least one body housing element (see fig. 9, body housing 80), But Taylor fails to teach a keyboard arranged as turning in relation to the body housing element.

However, Riddiford teaches a keyboard (see figs. 1-3, keyboard 12) arranged as turning in relation to the body housing element (see fig. 2-3, when the keyboard 12 is turning over the keyboard 5, col. 3, lines 34-col. 4, lines 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Taylor system and by the teaching of Riddiford on the turning keyboard in order to provide user with larger surface of full size keyboard.

Regarding claim 7, Riddiford teaches an electronic device (see fig. 1) wherein the keyboard turnable between a first and a second extreme position (see fig. 1 for first position and fig. 2, for second position), and in the first extreme position the keyboard is preferably placed over the body housing element so that the keyboard functions as protection for the display and the keyboard is at least partly invisible (see fig. 1), and in the second extreme position the keyboard is preferably so that the keyboard and the display are essentially entirely exposed (see figs. 1 and 2 or figs. 5 and 6, col. 4, lines 8-53).

Regarding claim 8, Riddiford teaches further comprising another display and a keyboard arranged activating one or more functions of the electronic device preferably when the keyboard is in the extreme position (see figs. 2 and 6, col.3, line 34-col. 4, lines 31).

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6. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Lee (U.S. Patent No. 6243595) further in view of Riddiford (U.S. Patent No. 6587675).

Regarding claim 13, Taylor fails to teach wherein keyboard turns between first and second extreme position, and wherein the first extreme position the keyboard is preferably placed over the body housing so that the keyboard functions as protection for the display and the keyboard is at least partly invisible and in the second extreme position the keyboard element is preferably so that the keyboard and the display are essentially entirely exposed.

However, Riddiford teaches an electronic device (see fig. 1) wherein the keyboard which has a first and a second extreme position (see fig. 1 and 5 for first position, and fig. 2 and 6, for second position), and wherein the first extreme position the keyboard is preferably placed over the body housing so that the keyboard functions as protection for the display and the keyboard is at least partly invisible (see fig. 1 and 5), and in the second extreme position the keyboard element is preferably so that the keyboard and the display are essentially entirely exposed (see fig. 2 or fig. 6, col. 4, lines 8-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the above combination of Taylor and Lee with Riddiford in order to provide user with larger surface of full size keyboard.

Regarding claim 14, Riddiford teaches further comprising a second display and another keyboard for activating one or more functions of the electronic device preferably when the

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keyboard is in the first extreme position (see fig. 1, col.3, line 34-col. 4, lines 31). Since first display 3 on fig. 2 and second display 4 is on fig. 1 and keyboard for activating one or more functions for make a call and so on).

Allowable Subject Matter

7. Claims 5 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for allowance

8. The following is an examiner's statement of reasons for allowance:

Claims 5 and 11 are allowed with the same reasons set forth in the previous Office action (paper mailed on 3-16-2006).

Response to Arguments

9. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that the reference of **Taylor**, the filing date is not an effective by using the date of provisional application No. 60/296,414. However, the examiner does not agree. Since the examiner is using the filing date of reference Taylor, base on the provisional application **No. 60/152,649 filed on 09-07-1999**, and that is an effective date to against the application.

Moreover, the related on the subject matter cited in the Taylor reference, can be found on the provisional application no. **60/152,649**: See the touchpad surface function as a keyboard or as

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touchpad (see page 4, lines 1-3), keyboard and touchpad with footprint of the key board and that key has pressed (see page 7, lines 12-17), and the keyboard is provided in the form of touch-sensitive surface, such found in a CIRQUE TM brand touchpad, and the touch-sensitive surface is preferably a capacitance-sensitive surface that has overlay template defining the keys of the keyboard (see page 10, lines 1-18 and page 13-14), also the capturing of a signature on a pressure sensitive paper to provide a tangible record event, and touch pad used stylus and function with any touchpad (see page 15, lines 13-22); and preferably the touchpad utilizes a capacitive-based technology, electromagnetic, electrostatic, resistive membrane, or other finger or stylus-responsive device. The switch or switches and keyboard are preferably base on mechanical switches, membrane switches, Rubber-dome switches or other appropriate switch activation technology (see page 16, lines 1-7).

Applicant also argues that the reference of Taylor does not teaches the key post 24 of key pad 20 does not touch the touch pad 26, However, the examiner does not agree, since reference Taylor teaches the key post 24 of keypad 20 is touched the touchpad 26 (see fig. 2-3), the technology provides a flexible substrate for the sensor grids of the mutually capacitance-sensitive touchpad. The flexible substrate is not only capable of conforming to actuate surfaces, such as the underside of the key-mat 22, it is also capable of being slight deformed. This is important because **when the key 20 is being pressed so that the post 24 depresses the dome 36 and actuates the mechanical switch 32, the edges 38 of the key 20 will be pressing on and slightly deforming the touchpad 26.** This movement of the touchpad 26 should be minimized in order to reduce damage that might occur to electrodes disposed thereon (see figs. 2-3 and page

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3, section [0051]). Therefore, the Taylor reference is teaching the limitation of the claims invention.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314).


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is (703) 306-0377.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh 
Division 2618
September 24, 2006

Anderson, Matthew D. (SPE 2618)

